APPENDIX B

BORING LOGS

FROJE	J1 19O.	20120	-00-83 8	outh Anchor		
H H	RAT. ST.	Ę .	OGY	BORING NO. B-1		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED 6/24/98 WATER LEVEL (ATD) 5.0'	SOIL	HEADSPACE
	H. HE	07	LI'I	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
- 1 -		B1-0.5 B1-1		FILL Moderately dense to dense, moist, brown to grayish brown, Clayey GRAVEL	GC	0.0
2 -		B1-2 B1-2.5		-		
3 -		D1-2.3		-	}	
- 4 -			9/	_		
5 -		B1-5 B1-5.5	1/0/	-grades to wet		
F 6 -		D1-3.3		-		
7 -				-		
8 -			1//	BAY MUD		
9				Stiff, wet, olive gray to gray, slightly Sandy CLAY		
10		B1-10		-sand content decreases	\mathbf{CL}	
- 11 -		B1-10.5			ĆĽ,	
- 12 -				-		
- 13 -				_		
- 14 -		B1-14		-	•	
- 15 -		B1-14.5		_		9.0
- 16 -				_		9.0
17				· _		
- 18 -		B1-18		-grades to Clayey, fine to medium SAND	60	12. 15
- 19 -		B1-18.5		grades to entropy, thre to medium SAIND	SC	12 to 15
20 -				-clean sand lense		
- 21 -						
- 22 -		Ď1 22		-sand gradation and clay content vary		
- 23 -		B1-22 B1-22.5				9
- 24 -	:					
			1//			

Figure C1, Log of Boring B-1, page 1 of 2

BORING ELEVATION:	l	ENGINEER/GEOLOGIST:	BILL KENNEY
		L	

TROJEC				OUTH Anchor		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. B-1	SOIL	1
DE	RES CO.	SAN	THO	DATE DRILLED 6/24/98 WATER LEVEL (ATD) 5.0'		HEADSPAC
	<u> </u>			EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
- 26 -			1//			
1		B1-26 B1-26.5		-		7.5 to 9
- 27 -		D1-20.3	× × × × × × × × × × × × × × × × × × ×	PANOCHE FORMATION		
- 28 -				Dense, moist, olive brown with orange brown veins, severely weathered SILTSTONE and CLAYSTONE		
- 29 -				The state of the s		
- 30 -						
- 31 -			& & &			
- 32 -	ļ		X X X X X X X X X X X X X X X X X X X			
- 33 -						
- 34 -			× × × × × × ×			
1			× × × × × ×			
- 35 -		1	× × × × × ×			
- 36 -		B1-36	× × × × × × × × × × × × ×	-	,	0.0
- 37 -		B1-36.5	× × × × × × × × × × × ×	-		0.0
- 38 -			× × × × × × × × × × × × × × × × × × ×	-very slow push		
- 39 -			X X X X X X X X X X X X X X X X X X	Total Stow push		
- 40 -	,					
- 41 -			× × × × × × × × × × × ×			
- 42 -						
- 43 -			X X X X X X X X X X X X X X X X X X X			·
1			× × × × × × × × × × × ×	·		
- 44 -			× × × × × ×			
- 45 -			1 × × × 1	4		
- 46 -		B1-45.5 B1-46	× × × × × × × × ×			
				BORING TERMINATED AT 46.5 FEET		

Figure C2, Log of Boring B-1, page 2 of 2

BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY

1 1031	CI NO.	20120	-00-85 5	outh Anchor		
H_T	PENETRAT. RESIST. BLOWS/FT.	LE .	OGY	BORING NO. B-2		· · · · · · · · · · · · · · · · · · ·
DEPTH IN FEET	ENET RESE	SAMPLE NO.	LITHOLOGY	DATE DRILLED 6/24/98 WATER LEVEL (ATD) 3.5'	SOIL	HEADSPACE
-	PI BI	"		EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
- 1		B2-0.5		FILL Moderately dense to dense, dry to moist, brown, Clayey GRAVEL	GC	0.0
2	1	B2-2		· -	- .	
- 4				▼ Moderately dense, wet, dark olive brown, Silty SAND with gravel		
- 5 -	_		9 9	- -	SM	
6 -	1	B2-6	7.7	BAY MUD		0.0
- 7 - - 8 -	-			Firm, wet, dark olive gray to dark gray, CLAY with some sand	CL	0.0
- 9 -						
- 10 -	<u> </u>	B2-10]	
- 11 -		D2-10		·] ,	1.5
- 12 -	-	٠		·		
- 13 -	-					
- 14 -	-	B2-14		·		
- 15 -				_		
- 16 -						
- 17 -				-		
18 -		B2-18		-sample tube shattered; no sample		
- 19 -				-		
- 20 -						
- 21 -				_		
- 22 -	-	B2-22	77	-grades to Clayey SAND		1.5
- 23 -	-				SC	1.5
- 24 -						
L	<u> </u>		17:77		1	

Figure C2, Log of Boring B-2, page 1 of 2

	7			
BORING ELEVATION:	! !	ENCRIPED/CEOLOGICE.	TOTAL I TENNENTENEZ	
Bolding ELL VATION.	11	ENGINEER/GEOLOGIST:	BILL KENNEY	
	3 L			

PROJEC	or NO.	30130	-00-85 5	outh Anchor		
H L	RAT. ST.	LE	OGY	BORING NO. B-2		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED 6/24/98 WATER LEVEL (ATD) 3.5'	SOIL	HEADSPACE
	PE I	S S	5	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
- 26 -						
		B2-26		-grades to Sandy CLAY		9.0
- 27 -				-	SC	
- 28 -				PANOCHE FORMATION		
- 29 -				Stiff, wet, light olive brown, Sandy CLAY (weathered claystone)	CL	
30 -				-		
31				-		
32 -				-driller noted hard push		
33				•		
34				Dense, moist, brown to orange, slightly cemented, Sandy SILT		
35				and Sandy CLAY		1
36 -		B2-36			,	
	1			BORING TERMINATED AT 36.5 FEET		
	1					

Figure C3, Log of Boring B-2, page 2 of 2

	_				
BORING ELEVATION:		ENGINEER/GEOLOGIST:	BILL	KENNEY	
	_				
BORING ELEVATION:		ENGINEER/GEOLOGIST:	BILL		

	AT. T.	Ţ	T	BORING NO. B-3		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED 6/24/98 WATER LEVEL (ATD) 4.0'	SOIL	UF A DOD A OD
	PEI BI	S.	ПП	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	HEADSPACE (PPM)
				SOIL DESCRIPTION		
- 1 -		B3-0.5	0.00	Dense, dry to moist, Sandy GRAVEL to Gravelly SAND		1.5
- 2 -			000			4.5
3 -		B3-2	000		GW/SW	7.5
4 -			0,0	▼		
- 5 -			000	-grades to wet		
- 6 -		:	0000			
7 -		B3-6	0000			0.0
' 8 -				BAY MUD Stiff, wet, dark gray to black, CLAY		
- 9 -				, was, and gray to older, Chili	CL	
10 -						
- 11 -		B3-10		·		0.0
- 12 -				1	,	
- 13 -				7		
- 14 -						
- 15 -		B3-14				1.5
- 16 -						
- 17 -				Grades to Clayey, fine to medium SAND, thin sand lenses with relatively "clean" sand		
- 18 -			1//	-clay and sand content vary	SC	
- 19 -		B3-18	1/1			0.0
- 20 -						
- 21 -						
- 22 -			1//			
- 23 -	:	B3-22				7.5 to 9.0
- 24 -						7.0

Figure C3, Log of Boring B-3, page 1 of 2

BORING ELEVATION:	11	ENTOR IEDER JOHNST O COOK	TATE T TENEDONE
BORING ELEVATION.	11	ENGINEER/GEOLOGIST:	BILL KENNEY
	11		DIEL INSINING I

		17 . E			BORING NO. B-3	ד	
	DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY		SOIL	
	Д "	E S JE	S.A.	ГШН	DATE DRILLED 6/24/98 WATER LEVEL (ATD) 4.0' EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	HEADSPACE (PPM)
					SOIL DESCRIPTION		
ı				177			
l	- 26 -		B3-26		· 		
ŀ	- 27 -				-		9.0
ŀ	- 28 –						
ŀ	- 29 –				· 4		
ŀ	⋅ 30 -				4		
\mid	31 -				·		
ŀ	32 -						
ŀ	33 –				Grades to stiff to your sife		
ŀ	34 –				Grades to stiff to very stiff, moist, dark olive brown, Sandy CLAY		
-	35 –					CL	
ŀ	36 -		B3-36			,	
-	37 -		D3-30				9.0
F	38 -	E.					
-	39 –						
-	40 -						
\mid	41 -						
L	42 -		İ				
F	43						
L	44						
L	45 -			9	Grades to Sandy CLAY with gravel		
L	46 –		·	0/.0			
	-		B3-46	(°° /)	BORING TERMINATED AT 46.5 FEET		1.5 to 3.0
							3.0

Figure C4, Log of Boring B-3, page 2 of 2

	•			
BORING ELEVATION:	П	ENGINEER/GEOLOGIST:	BILL KENNEY	
		ENGINEEROGEOLOGIS1.		

-	AT.		T	BORING NO. B-4		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY		SOIL	
	PEN BLO	SA	птн	DATE DRILLED	(USCS)	HEADSPACE (PPM)
				SOIL DESCRIPTION		
- 1 -		B4-0.5	9/9/	FILL Dense, dry, brown to grayish brown, Clayey GRAVEL and SAND		0.0
- 2 -		B4-2		-	GC	
- 4 -				-water at 4.2 feet 2 hours after push		
- 6 - - 7 -		B4-6		Soft to firm, wet, bluish gray, CLAY and CLAYSTONE fragments		0.0
- 8 - - 9 -	-			DAY MITO	CL	
- 10 - - 11 -		B4-10		BAY MUD Soft to firm, wet, dark gray, CLAY	CL	0.0
- 12 - - 13 - - 14 - - 15 - - 16 -		B4-14		Grades to gray, Clayey, fine to medium SAND	SC	0.0
- 17 - - 18 - - 19 - - 20 -		B4-18		Fine sand with clay predominantly Sandy CLAY -clay content decreases; sand lenses		
- 21 - - 22 - - 23 -		B4-22		- City Content decreases, Sand lenses	CL	0.0
- 24 -					·	

Figure C4, Log of Boring B-4, page 1 of 2

	٠.		 	
BORING ELEVATION:	П	TO LOD TEED (CECT O CYCIE	DAY A ALERDANA	
DOMING ELEVATION.	н	ENGINEER/GEOLOGIST:	BILL KENNEY	
	JI			

PROJEC		30130	-00-63 3	outh Anchor		
H. H	PENETRAT. RESIST. BLOWS/FT.	TE .	OGY	BORING NO. B-4		
DEPTH IN FEET	RESI	SAMPLE NO.	LITHOLOGY	DATE DRILLED 7/6/98 WATER LEVEL (ATD) 4.0'	SOIL	HEADSPACE
<u> </u>	P. E	01	5	EQUIPMENTSTRATAPROBE DRILLER_V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
- 26 -						
- 27 -		B4-26				7.5
28 -				-	-	
- 29 -					-	
30 -				-	-	
- 31 -				-	-	
1 1				-		
- 32 -					į	
- 33 -				-		
- 34 -						
- 35 -				-		
36 -		B4-36		-		9.0
- 37 -				· -].0
- 38 -				-		
39						
40						
 41 -			1	Grades to CLAY with claystone fragments (coarse sand to fine		
42				gravel size)	CL	
- 43 -				-	CL	9.0
- 44 -				-		
45 -			1/1	Driller comment "very hard at 46 feet"		
- 46 -		B4-46		- Printer comment very natural 40 feet		
		J10		BORING TERMINATED AT 46.5 FEET		
	ļ					

Figure C5, Log of Boring B-4, page 2 of 2

BORING ELEVATION:	Ш	ENGINEER/GEOLOGIST:	BILL KENNEY	
	ן נ		DADE AND VIOLE	

	I NO.			outh Anchor		
DEPTH IN FEET	IRA) IST.	PLE	063	BORING NO. B-5		
DE DE	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED7/6/98 WATER LEVEL (ATD)4.5'	SOIL	
	P B	<u> </u>	- 5	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	HEADSPAC (PPM)
				SOIL DESCRIPTION		
		D5 0 5	0.00	FILL		
		B5-0.5	0000	Dense, dry to moist, brown to gray brown, Sandy GRAVEL		7.5
- 2 -		B5-2	0.0.0.			"
- 3 -			000		GW	
F 4 -			0. V . 0	- W.		
- 5 -			0.0.0	▼ Water at 4.2 feet ~1.5 after push		
- 6 -			0.00			
7 -		B5-6	1/9/	Grades to medium dense, wet, brown, Clayey GRAVEL		9.0
- 8 -			0/0		GC	3.0
			18/2	-	GC	
9 -						
10		B5-10		BAY MUD		
11 -				Soft to firm, wet, dark gray, CLAY	_	9.0
12 -					CL	
- 13 -						
- 14 -		D		·		
15 -		B5-14		= = = = = = = = = = = = = = = = = = = =		9.0
- 16 -				· -		
- 17 -				Grades to Sandy CLAY		
				·	CL	
- 18 -	I	35-18		Sand lenses fine to medium with clay	CL	
- 19 -						9.0
- 20 -						
- 21 -						İ
- 22 -	1	35-22 E				
- 23 -	-	J-22 P		7		16.5
- 24 -				7		
						j

Figure C5, Log of Boring B-5, page 1 of 2

BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY

Ξ.	LAT.	,		BORING NO. B-5		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED	SOIL	
	PE BC	7S	ELT	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	HEADSPACE (PPM)
				SOIL DESCRIPTION		
- 26 -						
- 27 -		B5-26				9.0
- 28 -				· · · · · · · · · · · · · · · · · · ·		
- 29 -				Ţ		
- 30 -				1		
- 31 -				7		
- 32 -	!					
1				7		
- 33 -						
34 -						
35 -						
- 36 -		B5-36		PID out	. *	
37 -				-		
38 -				-		
- 39 -				4		
40				·		
41				_		
42				_		
- 43 -				· ·		
44			×××	PANOCHE FORMATION		
- 45 -			x x x x x x x x x x x x x x x x x x x	PANOCHE FORMATION Dense, moist, dark brown and grayish brown, CLAYSTONE, moderately weathered		
- 46 -		B5-46	× × × × × ×			
- 47 -			x x x	BORING TERMINATED AT 47 FEET		,
				BORGIO IERWINATEDAT 4/ FEET		
		_			1	

Figure C6, Log of Boring B-5, page 2 of 2

DODDIC ELEMATION			
BORING ELEVATION:	ENGINEER/GEOLOGIST:	DILI IZERININENZ	
		BILL KENNEY	•

H _	tat. T. ÆT.	当	УÐС	BORING NO. B-6		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED 7/6/98 WATER LEVEL (ATD)	SOIL	HEADSPACE
	PEI R	Š	EE17	EQUIPMENTSTRATAPROBE DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
		B6-0.5		Dense, dry, brown, Sandy GRAVEL with some clay		0.0
1 -		B0 0.5		- -		0.0
2 -		B6-2			GW	0.0
3 -			6 3			
- 4 -				Clay content increases Grades to Clayey GRAVEL	-	
5 -				Grades to Clayey GRAVEL	GC	
6 -		B6-6		<u> </u>		4.5 to
7 -				-		6.0
8 -			9/1	_		
9				BAY MUD		
10	·	B6-10		Stiff, moist to wet, dark gray, CLAY	CL	0.0
11				-	ć.	0.0
- 12 -						
- 13 -	į					
- 14 -		B6-14		-		
15 -						
16 -				4		
- 17 -	ĺ			· -		
18 -		B6-18	$\frac{1}{2}$	No sample receiver.		
- 19 -		JU-10		No sample recovery		
- 20 -				_		
- 21 -						
- 22 -		DC 22	1/			
- 23 -		B6-22		Grades to sandy CLAY	CL	0.0
- 24 -				Sand lenses Moderately dense, wet, dark gray, Clayey SAND		
			1//	3 37	SC	

Figure C6, Log of Boring B-6, page 1 of 2

BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
	Ertenteen Geberonst.	DIDLIKENNET

PROJEC	JI NO.	S8130	<u>-06-85</u> S	outh Anchor		
H	PENETRAT. RESIST. BLOWS/FT.	J	LITHOLOGY	BORING NO. B-6		
DEPTH IN FEET	NET	SAMPLE NO.	HOL	DATE DRILLED7/6/98 WATER LEVEL (ATD)	SOIL	HEADSPACE
	PE BE	S	111	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
- 26 -						
- 27 -		B6-26				
28 -						
1 :				Clay content increases		
- 29 -				7		` !
- 30 -	`					
- 31 -				-		
- 32 -				-		
- 33 -				4		
34 -				Stiff, wet, dark olive gray, CLAY with sand -sand content decreases		
35 -				-sand content decreases -light bluish gray inclusions		
36		B6-36			CL	
- 37 -				-	CL	
- 38 -				-		
- 39 -						
- 40 -						
- 41 -				· · · · · · · · · · · · · · · · · · ·		
42 -						
- 43 -				-		
- 44 -				4		
- 45 -		ĺ				
- 46 -	ľ	B6-46				
- 47 -		D0-40	<u> </u>	DORDIC TED AD A TED AT AS EDDS		
				BORING TERMINATED AT 47 FEET		

Figure C7, Log of Boring B-6, page 2 of 2

BORING ELEVATION:	П	ENGINEER/GEOLOGIST:	D	TI I IZITATATATA	
	П	ENGINEER/GEOLOGIST.	D	ILL KENNEY	
	•				

T ROJEC				BORING NO. B-7		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED WATER LEVEL (ATD)	SOIL	
D	PEN RE BLC	SA	ГІТН	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	HEADSPACE (PPM)
				SOIL DESCRIPTION		
- 1 -		B7-0.5	0.00	FILL Dense, dry to moist, brown to dark brown, Sandy GRAVEL		
- 2 -		B7-2	0000	-	GW	
- 4 -			000			
- 5 -			000			
- 6 - - 7 -		B7-6	0 0 0			
8 -			0000			
- 9 -			000			
- 10 -		B7-10	0000	-		
- 11 - - 12 -				BAY MUD Soft to firm, wet, gray, CLAY	,	
- 13 -					CL	
14 -		B7-14		Grades to Sandy CLAY		
- 15 - - 16 -						
- 17 -				Grades to Clayey SAND		
- 18 -				-	SC	
- 19 - - 20 -						
- 21 -				Clay and sand content vary		
- 22 -		B7-22		Ciay and said content vary		
- 23 - - 24 -				·		
24						

Figure C7, Log of Boring B-7, page 1 of 2

DODDIC TI TILL		
BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
	LINGINEER GEOLOGIST.	DILL KENNEY

	T 110.			outh Anchor		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	PLE).	LITHOLOGY	BORING NO. B-7		
DEI	RES	SAMPLE NO.	THO	DATE DRILLED WATER LEVEL (ATD)	SOIL	III A D GD A G
		<u> </u>	5	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	HEADSPACE (PPM)
			177	SOIL DESCRIPTION		
- 26 -						
- 27 -		B7-26	1//	No recovery, soft and wet		
- 28 -				-		
- 29 -				+		
30 -				-		
- 31 -				·		
- 32 -				-		
- 33 -				-		
- 34 -	-			Grades to stiff, gray CLAY with sand		
- 35 -				· · · · · · · · · · · · · · · · · · ·	CL	
36				-	CD	
37	į	B7-36		. +	•	
j l				-		
38 -						
- 39 -				-		
- 40 -						
- 41 -						
42 -						-
- 43 -				4		
- 44 -	1			Driller comment "harder ground"		
45				_		
- 46 -		B7-46				
47			7. 7.	BORING TERMINATED AT 47 FEET		
				TERMINITED AT 47 FEET		
L						

Figure C8, Log of Boring B-7, page 2 of 2

BORING ELEVATION:		
The state of the s	ENGINEER/GEOLOGIST:	BILL KENNEY
		DILL VENILE A

11031	CI NO.	1		POPING NO. D.O.	7	
E-P	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. B-8	507	T
DEPTH IN FEET	RES	SAMPI NO.	[HO]	DATE DRILLED 7/6/98 WATER LEVEL (ATD) 4.5'	SOIL	HEADSPACE
	H H		177	EQUIPMENT STRATAPROBE DRILLER V&W DRILLING	(USCS)	(PPM)
	ļ <u>.</u>			SOIL DESCRIPTION		
- 1 -		B8-0.5	000	FILL Dense, dry to moist, brown to dark brown, Sandy GRAVEL		
- 2 -	_		0000	-clay content increases	GW	
3 -		B8-2	0 0 0			
_ 1 -			0000		1	
			16/	▼ Grades to moderately dense, wet, brown to grayish brown,	†	
5 -			1/2	Clayey GRAVEL	GC	
F 6 -	1	B8-6		· · · · · · · · · · · · · · · · · · ·	1	
7 -				-	-	
- 8 -			4/	-		
9 -	1		19/	-		
10 -	-	B8-10	1/9			
- 11 -	<u> </u> 		10/	<u>-</u>	,	
- 12 -			0/2			
- 13 -			96			
- 14 -		B8-14	6/6			
- 15 -		B8-14		BAY MUD Soft to firm, wet, gray, CLAY		
- 16 -					CL	
- 17 -						
- 18 -			\mathbb{Z}		,	
- 19 -		B8-18		Sand content increases -grades to Sandy CLAY		
- 20 -				grades to Sality CLA I	CL	
- 21 -				·		
22 -						
1		B8-22		Sand lenses		
- 23 -				Grades to Clayey SAND	SC	
- 24 -				· -		
			1/://		<u> </u>	

Figure C8, Log of Boring B-8, page 1 of 2

DODDIG EVELVENCE		
BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
	Erica (EBR GEODOGIST.	DILL KENNE I

PROJECT NO. S8130-06-85 South Anchor PENETRAT. RESIST. BLOWS/FT. **BORING NO. B-8** LITHOLOGY SAMPLE NO. DEPTH IN FEET DATE DRILLED __7/6/98 SOIL WATER LEVEL (ATD) ____4.5' HEADSPACE **EQUIPMENT** STRATAPROBE (USCS) (PPM) DRILLER V&W DRILLING SOIL DESCRIPTION 26 B8-26 27 28 29 30 31 Grades to stiff, moist, blueish gray CLAY 32 CL33 34 35 36 Woody plant matter in sample B8-36 37 **BORING TERMINATED AT 37 FEET**

Figure C9, Log of Boring B-8, page 2 of 2

BORING ELEVATION:		
BOKING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
	DIT OF OF ORDING	DILL KENNET

TROJEC	or NO.	20120-	00-03 1	North Anchorage		
	PENETRAT. RESIST. BLOWS/FT.	 <u> </u>	ЭĠХ	BORING NO. B-1		
DEPTH IN FEET	LESIS OWS	SAMPLE NO.	гтногосу	DATE DRILLED 7/20/98 WATER LEVEL (ATD)	SOIL	IVE A DCD A C
	E N JB	7S	Ш	EQUIPMENT MOBILE B-61 DRILLER V&W DRILLING	(USCS)	HEADSPACE (PPM)
	ļ			SOIL DESCRIPTION		
		B1-0.5		ASPHALT CONCRETE/ASPHALT BASE PAVEMENT		
- 1 - - 2 -		1345	/./	SECTION Stiff, moist, brown, lean CLAY with sand		0.0
- 3 -	42	B1-2		-dark brown mottle		0.0
		1350		-	CL	
5 -				-		
				· -		
6 -	79	B1-6		†		0.0
7 -		1355		·		0.0
				4		
- 9 -				-		
10	37	B1-10		-		0.0
11 -		1403		4		0.0
12 -				-		
13 -				· -	•	
- 14 -				+		
- 15 -	74	B1-15	× × × × × × × × × × × × × × ×	PANOCHE FORMATION		0.0
- 16 -	İ	1406	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Dense, moist, olive gray, CLAYSTONE, severely weathered -		0.0
- 17 -		- 1	X	-		
- 18 -	1		× × × × × ×	4		
- 19 -			× × × × × ×	4		
20 -	36/50-2	B1-20		Dense to very dense, moist, strong brown, Silty		0.0
- 21 -		1412		Dense to very dense, moist, strong brown, Silty SANDSTONE, severely weathered		0.0
- 22 -		i				
- 23 -			::::::	·		
- 24 -				·		
- 25 -				· -		
- 26 -				Weathering decreases, sand content increases		
- 27 -				-5		
- 28 -				⊣		
- 29 -				-		
			1			I

Figure C1, Log of Boring B-1, page 1 of 2

Popping		
BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
	ENGINEERGEOLOGIST.	DILL RENNET

PROJECT NO. S8130-06-85 North Anchorage PENETRAT. RESIST. BLOWS/FT. **BORING NO. B-1** LITHOLOGY SAMPLE DEPTH IN FEET N O SOIL DATE DRILLED __7/20/98 WATER LEVEL (ATD) HEADSPACE (USCS) (PPM) **EQUIPMENT** MOBILE B-61 DRILLER V&W DRILLING SOIL DESCRIPTION 60 B1-30 0.0 31 1423 32 33 34 35 Layered series of strata, silt and sand content vary 36 37 38 39 40 65 B1-40 23 41 1429 42 43 44 45 Dense to very dense, very moist, olive brown, Clayey SANDSTONE, well cemented 46 47 48 49 60 B1-50 1.1 50 1453 **BORING TERMINATED AT 50 FEET**

Figure C2, Log of Boring B-1, page 2 of 2

DODDIO EL DIVIGIGA	_		
BORING ELEVATION:	1	ENGINEER/GEOLOGIST:	BILL KENNEY
	_	== == ================================	DIED RENNE 1

PRO	JIEC	I NO.	20120-	1 C8-00	forth Anchorage		
E		RAT. ST.	LE	OGY	BORING NO. B-2		
DEPTH	盟	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	птнособу	DATE DRILLED 7/20/98 WATER LEVEL (ATD) 36.0'	SOIL	HEADSPACE
		EL IS	\omega_		EQUIPMENTMOBILE B-61 DRILLER V&W DRILLING	(USCS)	(PPM)
					SOIL DESCRIPTION		
- 1	-	74	B2-0.5	× × ×	ASPHALT CONCRETE/AGGREGATE BASE PAVEMENT PANOCHE FORMATION		
- 2	2 -		0816	× × × × × × × × ×	Dense to very dense, moist, yellowish brown, SILTSTONE, fractured, moderately cemented		0.0
- 3	; -		B2-2 0818	× × × × × × × × ×	fractured, moderately cemented		
- 4				× × × × × × × × × × × × ×	_		
5	; -				4		
6	;	17/50-31	B2-6	<u></u> ;;	Grades to very fine SANDSTONE		0.0
['8			0828		-		
- 9	ŀ				1		
- 10) -	0/50 5	DO 10		,		
- 11	ا ا	0/50-5'	B2-10 0840				0.0
- 12							
- 13						,	
- 14 - 15	1						
- 16		75/5"	B2-15 0840		· · · · · · · · · · · · · · · · · · ·		0.0
- 17		j	0040		7		
- 18	; -						
- 19	, -	}			Grades to very dense, moist, grayish brown, SANDSTONE		·
- 20	141	0/50-4'	B2-20		4		
- 21	-		0846				0.0
- 22 - 23	- 1						
- 24					1		
25	- 1				·		
- 26	- 1						
- 27	+						
- 28					Driller comment "very hard"	,	
- 29	+				4		
							

Figure C2, Log of Boring B-2, page 1 of 2

DODDIG TI TILL TOO	7		
BORING ELEVATION:	1	ENGINEER/GEOLOGIST:	BILL KENNEY
	J	ENGINEERO COLOCIST.	DILL KENNET

PROJECT NO. S8130-06-85 North Anchorage PENETRAT. RESIST. BLOWS/FT. **BORING NO. B-2** LITHOLOGY SAMPLE DEPTH IN FEET Ñ. SOIL DATE DRILLED __7/20/98 WATER LEVEL (ATD) ____36.0' HEADSPACE (USCS) (PPM) **EQUIPMENT** MOBILE B-61 DRILLER V&W DRILLING SOIL DESCRIPTION 50-2" B2-30 0855 6.0 31 32 33 Color change to gray 34 35 36 -water at 36 feet 37 38 39 40 37/50-4 B2-40 41 1050 42 43 44 Dense, moist, gray, CLAYSTONE 45 46 47 Cuttings very moist 48 49 50 45/50-41 B2-50 51 1105 **BORING TERMINATED AT 51 FEET**

Figure C3, Log of Boring B-2, page 2 of 2

	.		
BORING ELEVATION:	П	ENGINEER/GEOLOGIST:	BILL KENNEY
	1		 DIED KENTIEL

IKOJE	CI NO.	36130-	00-03 1	forth Anchorage		
_{# _}	PENETRAT. RESIST. BLOWS/FT.	<u> </u>	ζζ	BORING NO. B-3		
DEPTH IN FEET	NETH LESIS OWS	SAMPLE NO.	гітногосу	DATE DRILLED 7/21/98 WATER LEVEL (ATD)	SOIL	HEADSPACE
	PEI R BL	Š	III	EQUIPMENT MOBILE B-61 DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
1	29	B3-0.5		ASPHALT CONCRETE/ASPHALT BASE		
- 1 - 2 -	29	0740		FILL	ı	0.0
- 3 -	38	B3-2 0744		Stiff to very stiff, moist, olive brown to brown, Sandy CLAY	CL	0.0
- 4 -	1	0744		Ī		
- 5 -						
- 6 -	21	D2.6				
- 7 -	31	B3-6 0749		PANOCHE FORMATION		0.0
- 8 -				Stiff to very stiff, moist, olive brown, severely weathered, CLAYSTONE with gravel size fragments		
- 9 -						
- 10 -	54	B3-10		_		0.0
11 -	1	0753		Grades into coarser material i.e. SILTSTONE very fine		0.0
- 12 - - 13 -				sandstone with weathered clay in fractures		
- 14 -				· · · · · · · · · · · · · · · · · · ·	,	
15 -		L		1		
16 -	34/50-3	B3-15 0802		. 7		0.0
- 17 -		0002		Layered strata		
- 18 -						
- 19 -				_		
- 20 -	34/50-4'	B3-20				
21 -		0810		· · · · · · · · · · · · · · · · · · ·		0.0
- 22 -						
- 23 -				4		
24 -				-		
- 25 - - 26 -				-		
27						,
- 28 -				. 7		
- 29 -						

Figure C3, Log of Boring B-3, page 1 of 2

BORING ELEVATION:		
BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY

PROJECT NO. S8130-06-85 North Anchorage PENETRAT. RESIST. BLOWS/FT. LITHOLOGY BORING NO. **B-3** SAMPLE DEPTH IN FEET Ň. SOIL DATE DRILLED __7/21/98 WATER LEVEL (ATD) _ HEADSPACE (USCS) (PPM) **EQUIPMENT** MOBILE B-61 DRILLER V&W DRILLING SOIL DESCRIPTION 31 Hard, moist, gray, CLAYSTONE 32 33 34 35 50-5" B3-35 0.0 36 0826 37 38 39 40 48/50-4 B3-40 23 41 0826 42 43 44 45 46 47 48 49 50 89 B3-50 9 51 0846 **BORING TERMINATED AT 51.5 FEET**

Figure C4, Log of Boring B-3, page 2 of 2

DODDIO		<u>'</u>
BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
		DILL KENNE I

TROJEK				DODING NO.		
	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. B-4		T
DEPTH IN FEET	NET	AMI	HOI	DATE DRILLED WATER LEVEL (ATD)	SOIL	HEADSPACE
	EA IN	δ.	LII	EQUIPMENT MOBILE B-61 DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
1 -	17	B4-0.5		ASPHALT CONCRETE PAVEMENT		
- 2 -	1,	1145	1/1/	FILL		0.0
- 3 -	27	B4-2 1150		Moderately dense, moist, brown, Sandy CLAY		0.0
- 4 -		1150				
- 5 -						
- 6 -	65-6"	R4-6				
- 7 -		B4-6 1155				0.0
- 8 -				-		
- 9 -	,			-{		
- 10 - - 11 -	74	B4-10 1158		· · · · · · · · · · · · · · · · · · ·		0.0
11 -		1158				"
- 13 -						
- 14 -				7	,	
- 15 -	70-6"	D4 15				
- 16 -	/0-6"	B4-15 1204		No recovery		0.0
17						
- 18 -		·		_		
- 19 -				-		
- 20 -	60-6"	B4-20 1210				0.0
- 21 -		1210		-		0.0
- 22 - - 23 -						
- 24 -						
- 25 -				1		
- 26 -						
- 27 -						
- 28 -					ļ	
- 29 -						
			1/1			

Figure C4, Log of Boring B-4, page 1 of 2

Dobbie	7		
BORING ELEVATION:	П	ENGINEER/GEOLOGIST:	BILL KENNEY
	1	ENGINEEROEOEOGIST.	DILL KENNET

PROJE	CI INO.	30130-	1 60-00	orin Anchorage		
H	KAT.	LE LE	75C	BORING NO. B-4		
DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	гтногосу	DATE DRILLED 7/21/98 WATER LEVEL (ATD)	SOIL	HEADSPACE
	E H	S)		EQUIPMENT MOBILE B-61 DRILLER V&W DRILLING	(USCS)	(PPM)
!				SOIL DESCRIPTION		
- 31 -	50-3"	B4-30 1222				0.0
- 32 -		1222				
33 -				. 7		
- 34 -						
- 35 -				_		
- 36 -						
- 37 -						
- 38 -						
- 39 -				· · · · · · · · · · · · · · · · · · ·		
- 40 - - 41 -	50-3"	B4-40	× × × × × × × × × × × × × × × × × × ×	Sample appears to be cuttings		10
- 42 -		1235	* * * * * * * * * * * * * * * * * * *	· · ·		
- 43 -			× × × × × ×	·		
- 44 -		:	X X X		•	
- 45 -			× × × × × ×			
- 46 -			X X X X X X			
- 47 -			× × × × × × × × × × × × × × × × × × ×		•	
- 48 -				-		
- 49 -	78	B4-50	* * * * * * * * * * * * * * * * * * *	No recovery		
50 -				BORING TERMINATED AT 50 FEET		
						·

Figure C5, Log of Boring B-4, page 2 of 2

BORING ELEVATION:	П	ENGINEER/GEOLOGIST:	BILL KENNEY	
	П		 DIDE RENIVET	

S8130-06-85 North Anchorage PROJECT NO. PENETRAT. RESIST. BLOWS/FT. BORING NO. B-5 LITHOLOGY SAMPLE DEPTH IN FEET 8 SOIL DATE DRILLED __7/21/98 WATER LEVEL (ATD) _ HEADSPACE (USCS) (PPM) EQUIPMENT MOBILE B-61 DRILLER V&W DRILLING SOIL DESCRIPTION ASPHALT CONCRETE/ASPHALT BASE 31 B5-0.5 1 8 FILL/TOPSOIL 0930 2 Stiff, moist, brown, Sandy CLAY B5-2 CL 13 3 0934 4 -dark brown mottle 5 6 50-5" B5-6 34 7 0942 PANOCHE FORMATION 8 Dense to very dense, moist, dark brown, SANDSTONE 9 -orange/brown clay in fractures 10 50 B5-10 11 0949 12 13 14 15 120 B5-15 Grades to dark brown 23 16 0958 17 18 19 20 70-5" B5-20 Grades to olive brown 20 21 1010

Figure C5, Log of Boring B-5, page 1 of 2

22232425262728

29

ENV_NO_WELL CARQ_N.GPJ 09/16/98

BORING ELEVATION:	EMCDIEED/CEOLOGICE	TATE TOTAL T
222 1111011.	ENGINEER/GEOLOGIST:	BILL KENNEY

Driller comment "very hard"

PROJECT NO. S8130-06-85 North Anchorage PENETRAT. RESIST. BLOWS/FT. **BORING NO. B-5** LITHOLOGY SAMPLE DEPTH IN FEET Š. SOIL DATE DRILLED __7/21/98 ____ WATER LEVEL (ATD) _ HEADSPACI (USCS) (PPM) EQUIPMENT ____ MOBILE B-61 DRILLER V&W DRILLING SOIL DESCRIPTION 75 B5-30 1020 50 31 -32 33 34 Grades to dark brown SANDSTONE 35 36 37 38 39 40 B5-40 No Recovery 14 41 42 43 44 45 Slow drilling 46 47 48 49 B5-50 No recovery 50 **BORING TERMINATED AT 50 FEET**

Figure C6, Log of Boring B-5, page 2 of 2

BORING ELEVATION:	П	ENGINEER/GEOLOGIST:	 BILL KENNEY	
]	ENGINEER GLOEGIST.	 DILL KENNE I	

I KOJEC		36130-	1 C0-00	form Anchorage		
H H	PENETRAT. RESIST. BLOWS/FT.	E	JGY .	BORING NO. B-6		
DEPTH IN FEET	NETI VESIS OWS	SAMPLE NO.	LITHOLOGY	DATE DRILLED 7/21/98 WATER LEVEL (ATD)	SOIL	HEADSPACE
	BE BE	S	117	EQUIPMENT MOBILE B-61 DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
1	38	B6-0.5		ASPHALT CONCRETE/ASPHALT BASE		
- 2 -	30	1535		FILL		0.0
- 3 -	86	B6-2 1540	× × ×	Dense, moist, brown, Silty SAND and Clayey SAND PANOCHE FORMATION		0.0
- 4 -	i	1340	× × × × × × × × × × × × × × × ×	Very dense, moist, olive brown, SILTSTONE, well cemented		
- 5 -			× × × × × × × × × × × ×			
- 6 -	50	B6-6	X X X			
├ 7 -	50	1548	× × × × × × × × × × × × ×	Very dense		0.0
- 8 -				very defise		
- 9 -			× × × ×			
10	50	B6-10	*			
11		1555	**************************************	_		0.0
- 12 - - 13 -		i	× × × × ×	-		
- 14 -			× × × × × ×	-		
- 15 -		Ĺ	× × × × × × ×			
16 -	50-5"	B6-15 1602	$\times \times \times$,	0.0
17			× × × × × × × × × × × × × × × × × × ×			
- 18 -			× × × × × × × × ×			
19 -			× × ×			
- 20 -	50	B6-20	× × × × × ×	4		
- 21 -		1610	X X X X X X X X X X X X X X X			0.0
- 22 -			× × × × × × × × × × × × × × × × × × ×			
- 23 -			× × × × × × × × × × × × × × × × × × ×	-		
- 24 - - 25 -			x x x x x x x x x x x x x x x x x x x			
26 -			× × ×			
27	Ì		X X X X X X X X X X X X X X X X X X X	7		
- 28 -			X X X X	1		
- 29 -				Driller comment "very hard drilling"	-	
			× × ×			

Figure C6, Log of Boring B-6, page 1 of 2

DODD IO EX EXTENSION		
BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
	ENGINEEROEOLOGIST.	DILL KENNET

PROJECT NO. S8130-06-85 North Anchorage PENETRAT. RESIST. BLOWS/FT. BORING NO. B-6 LITHOLOGY SAMPLE Ŏ. SOIL DATE DRILLED __7/21/98 _____ WATER LEVEL (ATD) _ HEADSPACE (USCS) (PPM) EQUIPMENT ___ MOBILE B-61 DRILLER V&W DRILLING SOIL DESCRIPTION 50-1" B6-30 No recovery 31 **REFUSAL AT 31 FEET**

Figure C7, Log of Boring B-6, page 2 of 2

DODDIO EL ELLA MICO.		
BORING ELEVATION:	ENGINEER/GEOLOGIST:	BILL KENNEY
	ENGINEER GEOLOGIST.	DILL VENNEA
· · · · · · · · · · · · · · · · · · ·		

PROJE	CI NO.	<u> </u>	-06-85 N	North Anchorage		
H-TE	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. B-7		
DEPTH IN FEET	RESI	SAMPI NO.	HOI	DATE DRILLED7/21/98 WATER LEVEL (ATD)	SOIL	HEADSPAC
	H	, J	177	EQUIPMENTMOBILE B-61 DRILLER V&W DRILLING	(USCS)	(PPM)
				SOIL DESCRIPTION		
- 1 -	44	B7-0.5		ASPHALT CONCRETE/ASPHALT BASE		
- 2 -		1720		PANOCHE FORMATION		0.0
- 3 -	83	B7-2 1728		Dense, moist, brown to light brown SANDSTONE, moderately cemented		0.0
- 4 -				- · · ·		
- 5 -				-		
- 6 - - 7 -	50	B7-6 1737		Cementation increases to well cemented		0.0
- 8 -		1/3/		· ·		0.0
- 9 -				1		
- 10 -	75	B7-10		Name		
	/3	D/-10		No recovery BORING TERMINATED AT 10.5 FEET		
					,	
			1.			
Í						*
İ						
1						
•						•
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				!		

Figure C7, Log of Boring B-7, page 1 of 1

BORING ELEVATION:		ENION EEDS (GEOV O Green	D. T. T. T. T. T. T. T. T. T. T. T. T. T.	
	H	ENGINEER/GEOLOGIST:	BILL KENI	NEY
				1337 2

S8130-06-85 North Anchorage PROJECT NO. PENETRAT. RESIST. BLOWS/FT. **BORING NO. B-8** LITHOLOGY SAMPLE DEPTH IN FEET Š. SOIL DATE DRILLED __7/20/98 WATER LEVEL (ATD) _ HEADSPACE (USCS) (PPM) MOBILE B-61 **EQUIPMENT** DRILLER V&W DRILLING SOIL DESCRIPTION ASPHALT CONCRETE/ASPHALT BASE B8-0.5 40 1 0.0 1814 2 TOPSOIL/FILL 28 B8-2 Stiff, moist, dark brown, Sandy CLAY 13 3 1823 CL4 5 6 38 B8-6 23 7 1830 8 9 10 49 B8-10 PANOCHE FORMATION 2 11 Very stiff, moist, olive brown, CLAY and severely weathered CLAYSTONE

BORING TERMINATED AT 11.5 FEET

Figure C8, Log of Boring B-8, page 1 of 1

BORING ELEVATION:	il	ENCINEED (CEOLOGICE	DIT I TANDAMA	
	ı	ENGINEER/GEOLOGIST:	BILL KENNEY	
	_			